

FIG. 1

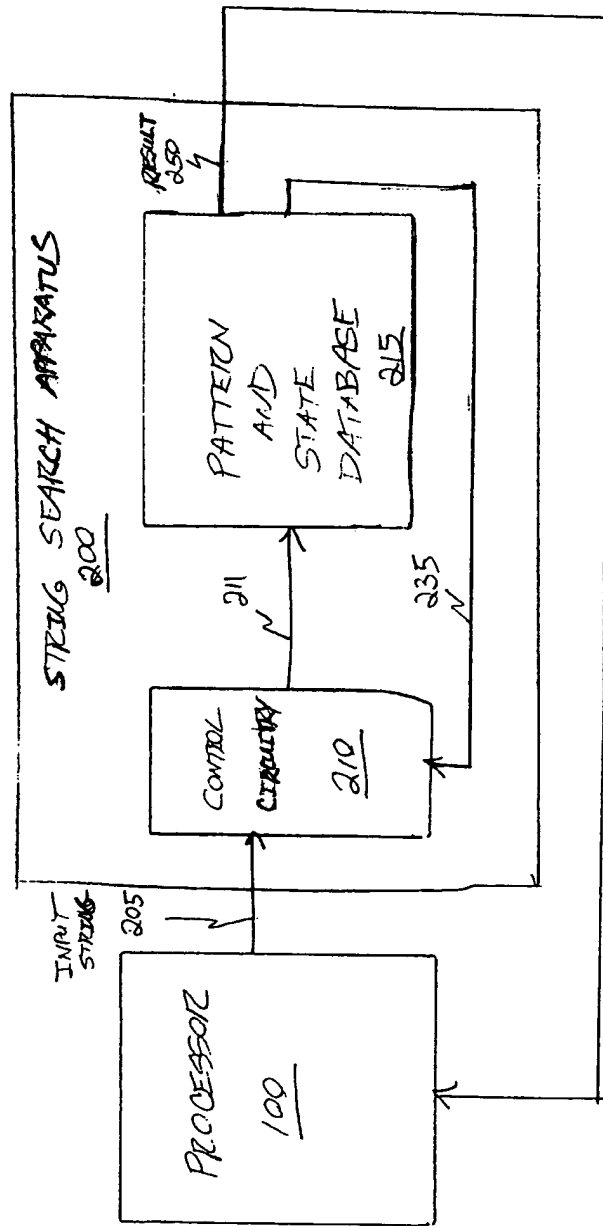


FIG. 2A

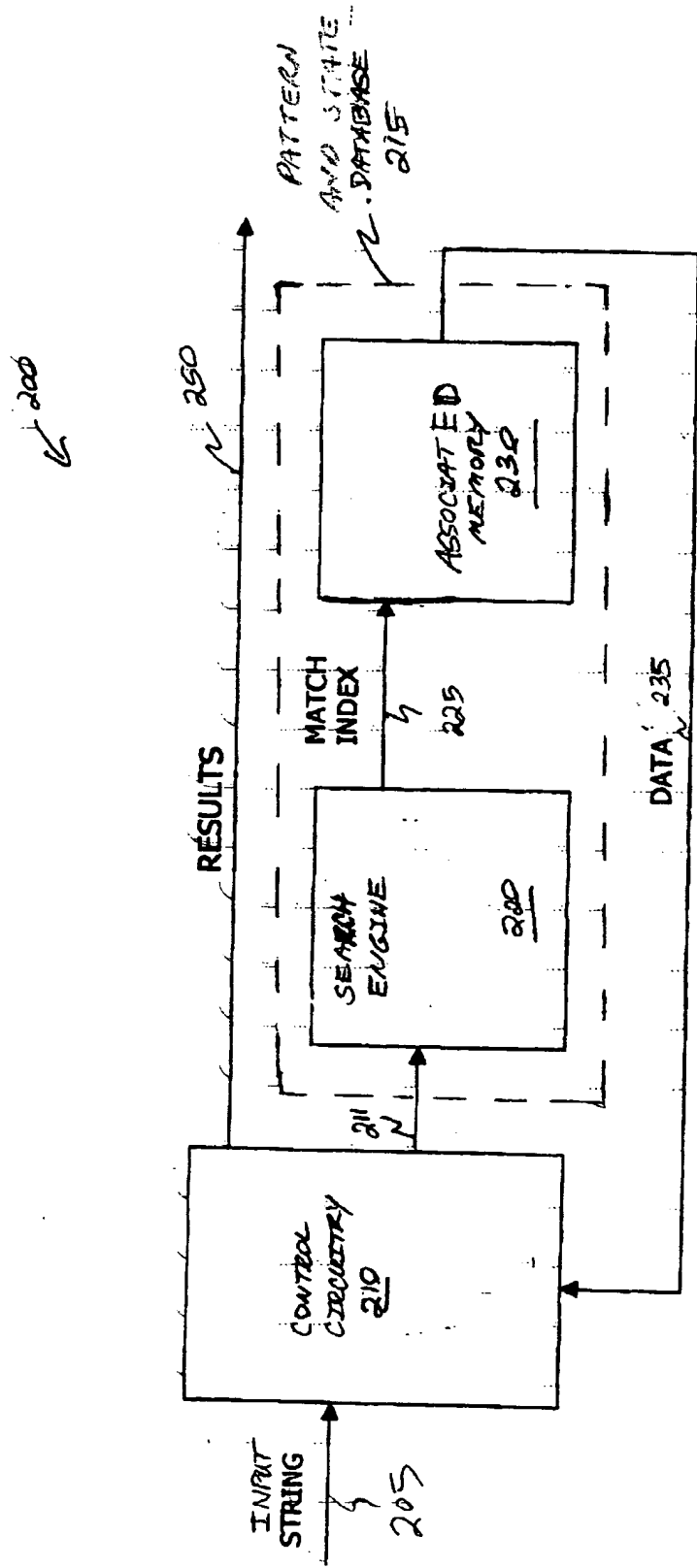
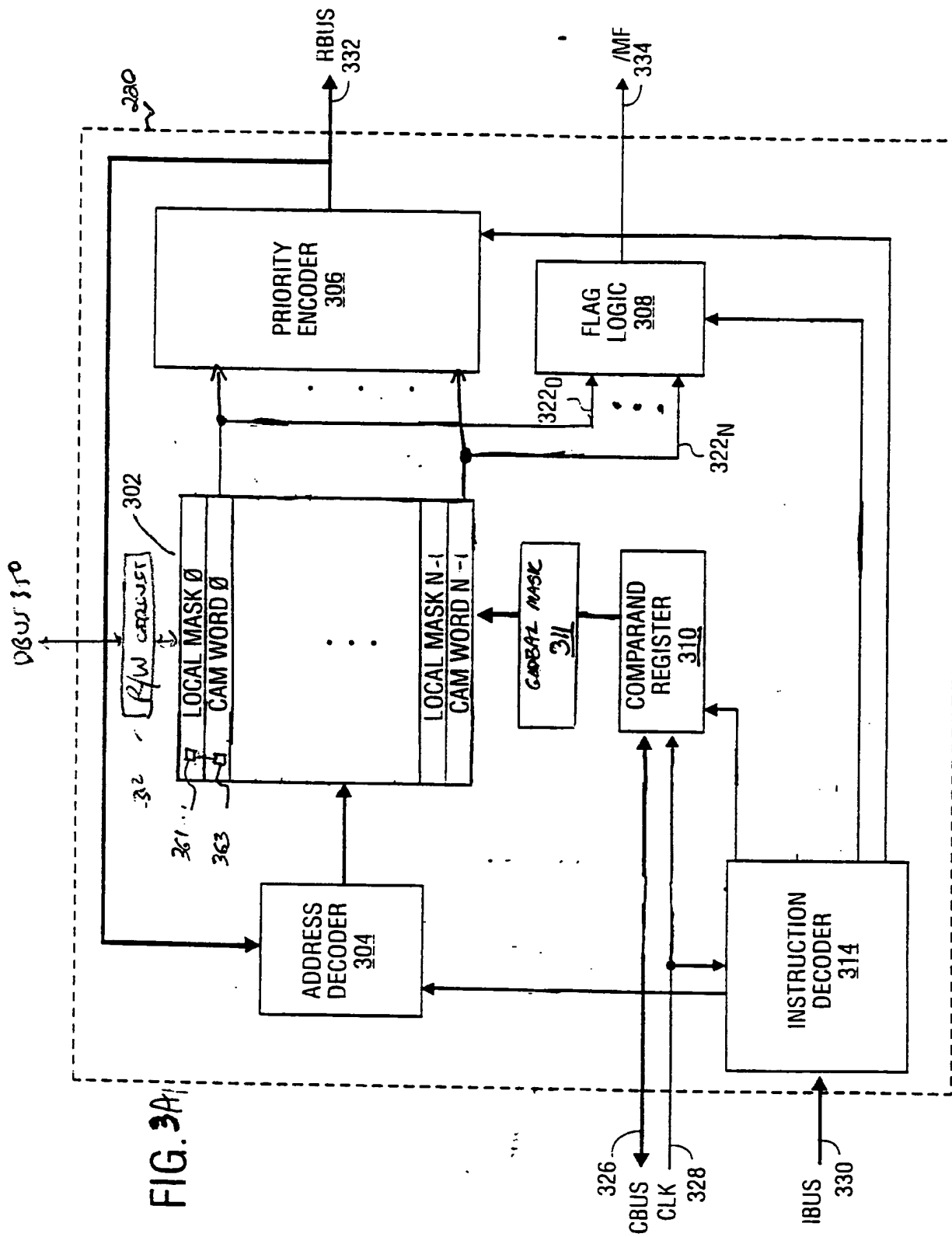


FIG. 2B



PATTERN  
AND STATE  
DATABASE  
215

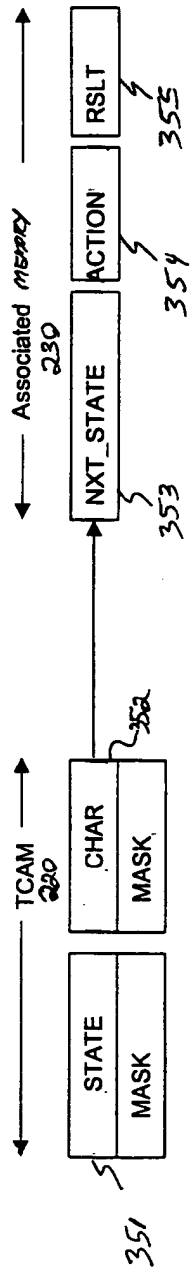


FIG. 3B

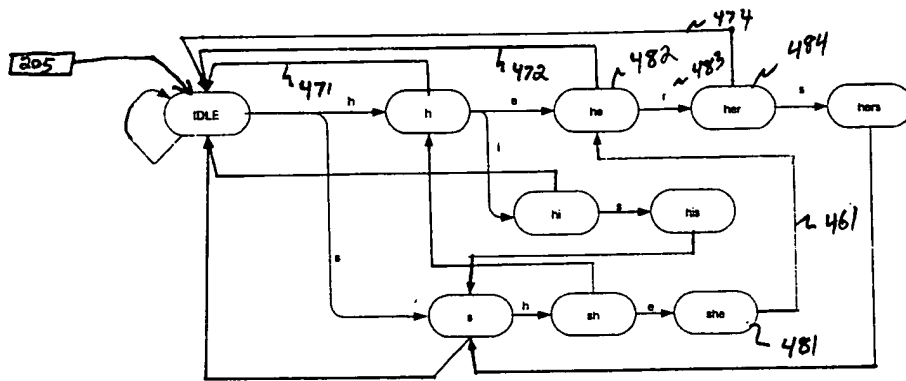


FIG. 4A

Address	STATE	CHAR	NXT STATE	ACTION	RESULT
"goto" transitions					
0	IDLE	H	H	NOP	0
1	IDLE	S	S	NOP	0
2	H	E	HE	OUTPUT Result	1
3	HE	R	HER	NOP	0
4	HER	S	HERS	OUTPUT Result	2
5	H	I	HI	NOP	0
6	HI	S	HIS	OUTPUT Result	3
7	S	H	SH	NOP	0
8	SH	E	SHE	OUTPUT Results	4
Failure transitions					
9	H	*	IDLE 471	Failure	0
10	HE	*	IDLE 472	Failure	0
11	S	*	IDLE 473	Failure	0
12	SH	*	H	Failure	0
13	SHE	*	HE	Failure	0
14	HIS	*	S	Failure	0
15	HER	*	IDLE 474	Failure	0
16	HERS	*	S	Failure	0

GOTO BLOCK 491  
 FAILURE BLOCK 492  
 TCAM 220  
 ASSOCIATED MEM 230  
 PATTERN AND STATE DATABASE 215

FIG. 4B

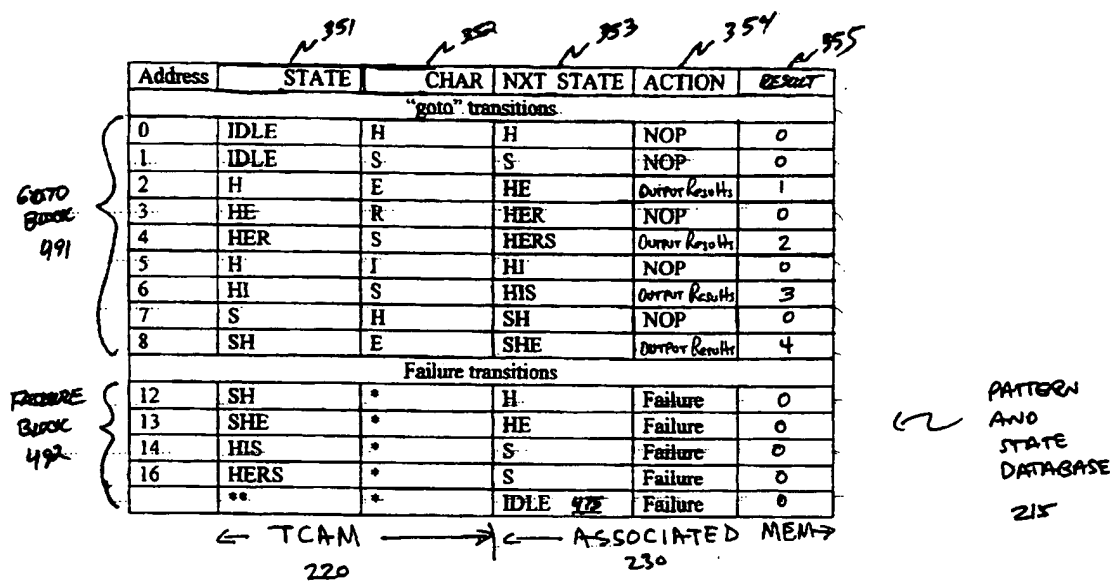


FIG. 4C



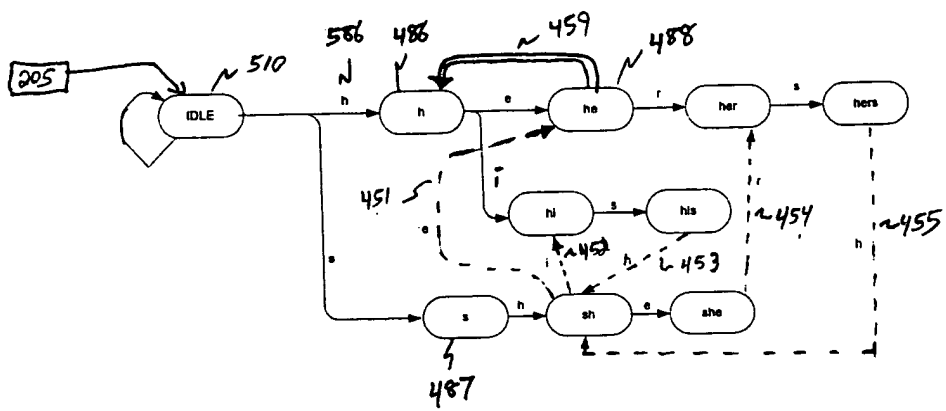


FIG. 5

Address	STATE	CHAR	NEXT STATE	ACTION	RESULT
0	H	E	HE	Output Results	1
1	HE	R	HER	NOP	0
2	HER	S	HERS	Output Results	2
3	H	I	HI	NOP	0
4	HI	S	HIS	Output Results	3
5	S	H	SH	NOP	0
6	SH	E	SHE	Output Results	4
7	SH	I	HI	NOP	0
8	HIS	H	SH	NOP	0
9	SH	E	HE	NOP	0
10...	**	H	H	NOP	0
11	**	S	S	NOP	0
12	**	*	IDLE	NOP	0

Block 591 { 0, 1, 2, 3, 4, 5, 6, 7, 8, 9  
 Block 592 { 10...  
 Block 593 { 11, 12

TCAM 220 ←  
 ASSOCIATED MEM 230 →

351, 352, 353, 354, 355

FIG. 6

PATTERN AND  
 STATE DATABASE  
 215

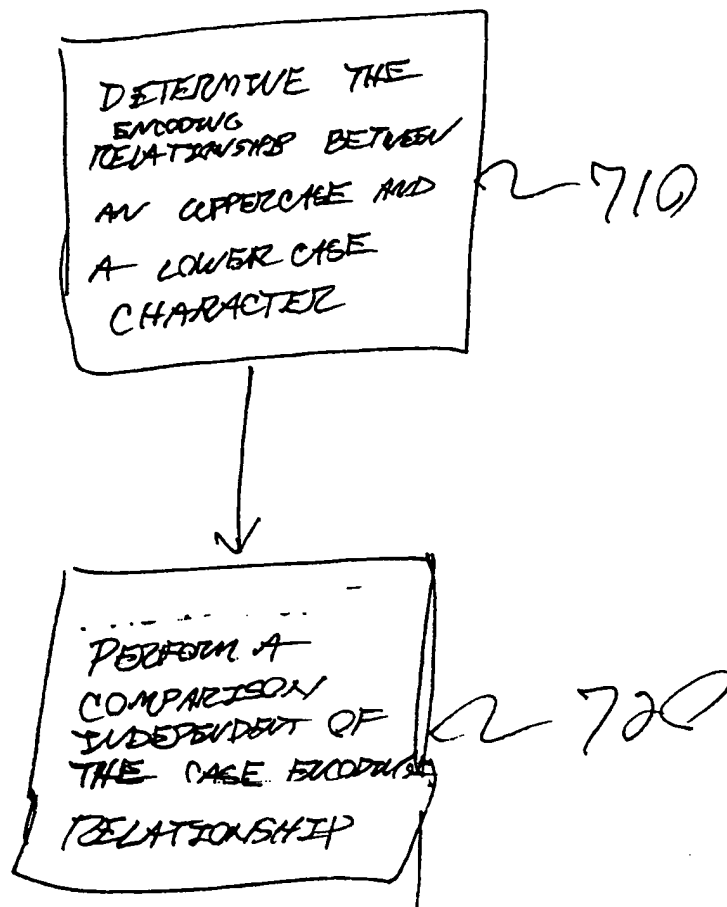


FIG. 7.

730

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL	SOH	STX	ETX	EOT	ENQ	ACK	BEL	BS	TAB	LF	VT	FF	CR	SO	SI
1	DLE	DC1	DC2	DC3	DC4	NAK	SYN	ETB	CAN	EM	SUB	ESC	ES	GS	RS	US
2		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
6		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7	p	q	r	s	t	u	v	w	x	y	z	(		)	~	

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FIG 7A

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0 NUL	SOH	STX	ETX	EOT	ENQ	ACK	BEL	BS	TAB	LF	VT	FF	CR	SO	SI
1 DLE	DC1	DC2	DC3	DC4	NAK	SYN	ETB	CAN	EM	SUB	ESC	FS	GS	RS	US
2	"	#	\$	%	&	'	(	)	*	+	,	-	.	/	
3 0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5 P	Q	R	S	T	U	V	W	X	Y	Z					
6	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7 p	q	r	s	t	u	v	w	x	y	z					
8															
9															
A															
B															
C															
D @											[	\	]	^	
E											{		}		
F															

FIGURE 7C

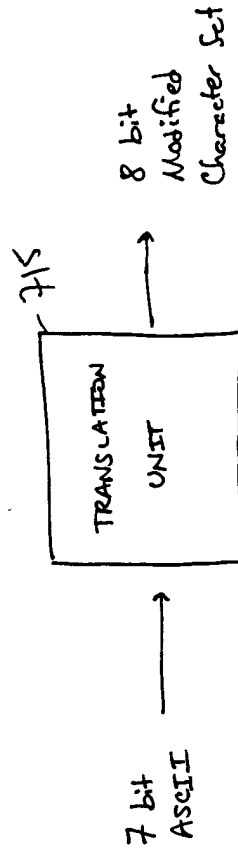


FIG. 7B

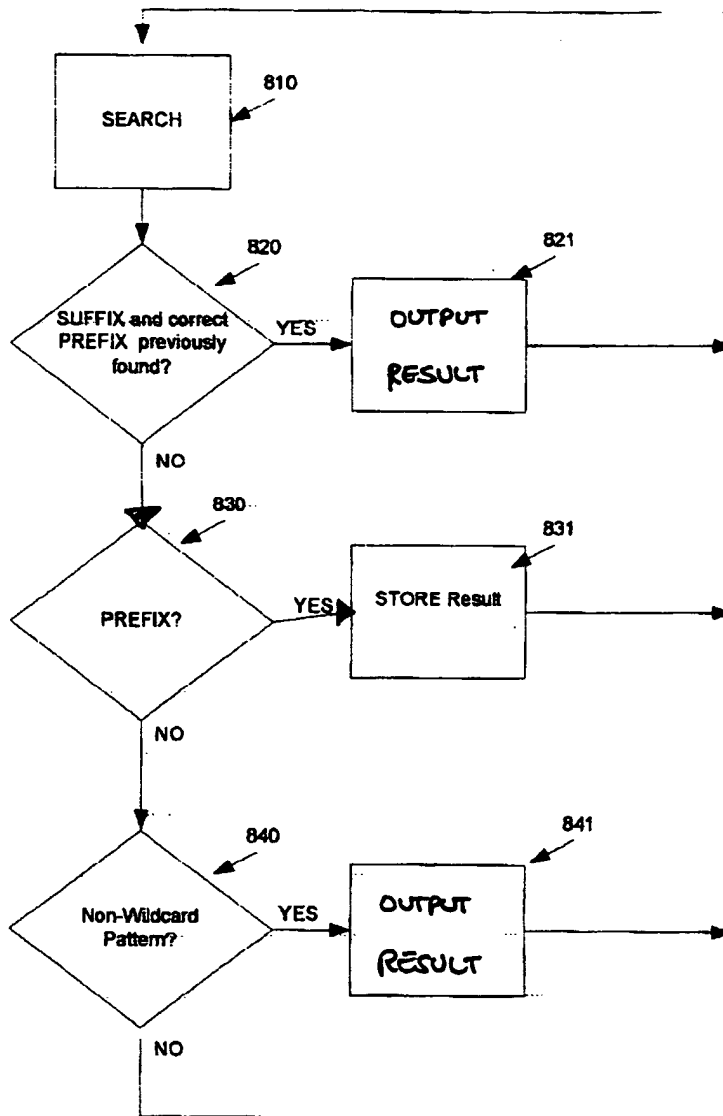


FIGURE 8A

200

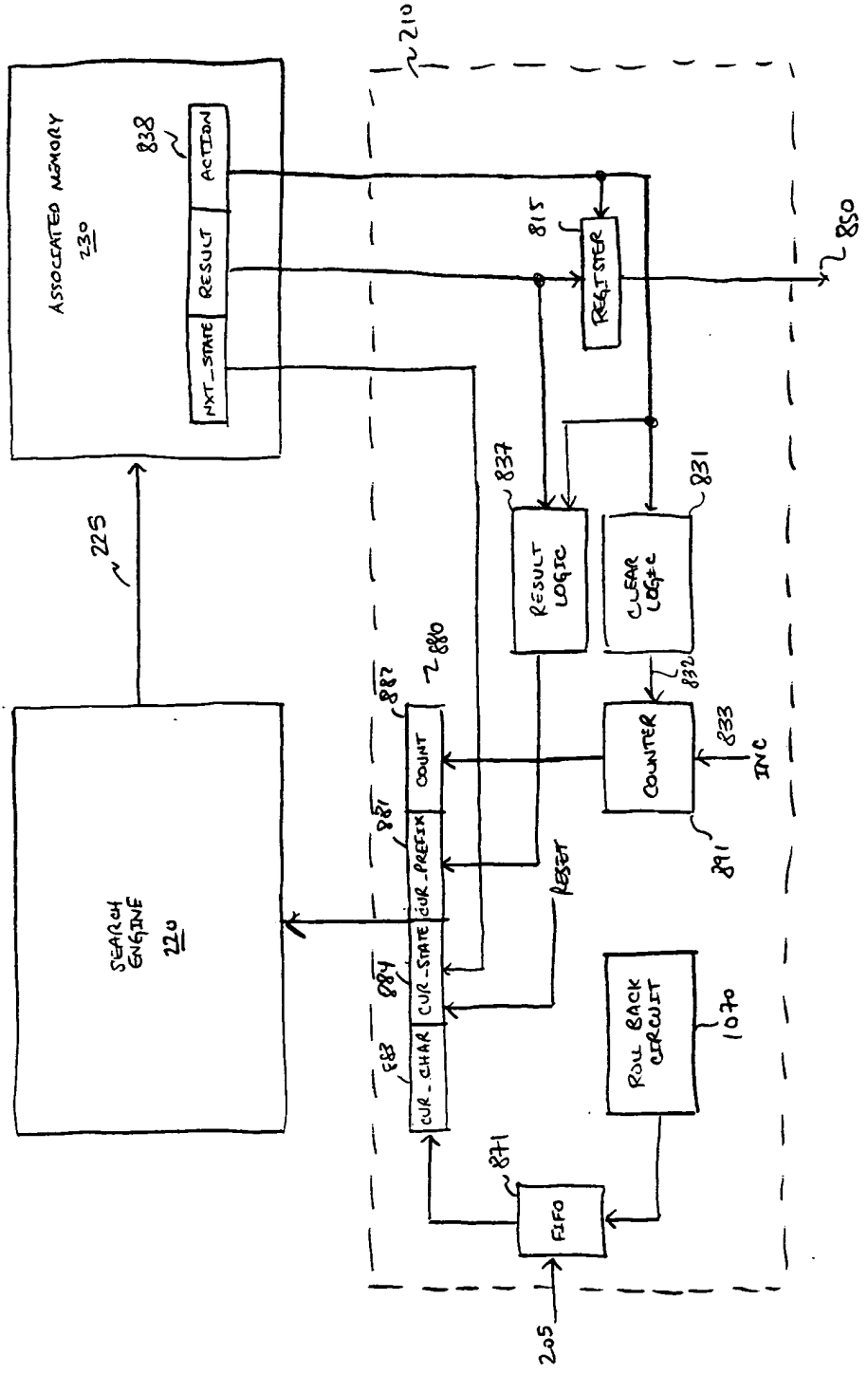


FIG. 8B

Address	STATE	CHAR	PREV RSLT	NXT STATE	RSLT	ACTION
0	IDLE	T	*	IDLE	101	UPDATE CUR. PREFIX
1	IDLE	B	*	B	0	NOP
2	B	L	*	BL	0	NOP
3	BL	E	101	IDLE	102	OUTPUT WILD CARD MATCH

351 352 353 354 355 356  
 ← TOM 220 → ← ASSOCIATED MEMORY 230 →

FIG. 8C



Address	STATE	CHAR	PREV RSLT	COUNT	NXT STATE	RSLT	ACTION
0	IDLE	T	*	0	IDLE	101	UPDATE CUR PREFIX
1	IDLE	B	*	*	B	0	NOP
2	B	L	*	*	BL	0	NOP
3	BL	E	101	5	IDLE	102	OUTPUT WELD CARD MATCH

351 352 356 357 353 355 354  
 ← TEAM 220 → ← ASSOCIATED MEMORY 230 →

FIG 8D

Address	STATE	CHAR	PREV RSLT	NXT STATE	RSLT	ACTION
0	IDLE	S	*	IDLE	102	UPDATE CUR-PREFIX
1	IDLE	T	*	IDLE	101	UPDATE CUR-PREFIX
2	IDLE	B	*	B	0	NOP
3	B	L	*	BL		NOP
4	BL	E	101	IDLE	103	OUTPUT FIRST WILD CARD MATCH
5	BL	E	102	IDLE	104	OUTPUT SECOND WILD CARD MATCH

← TCAM 220 → | ← ASSOCIATED MEMORY 230 →

FIG. 8E

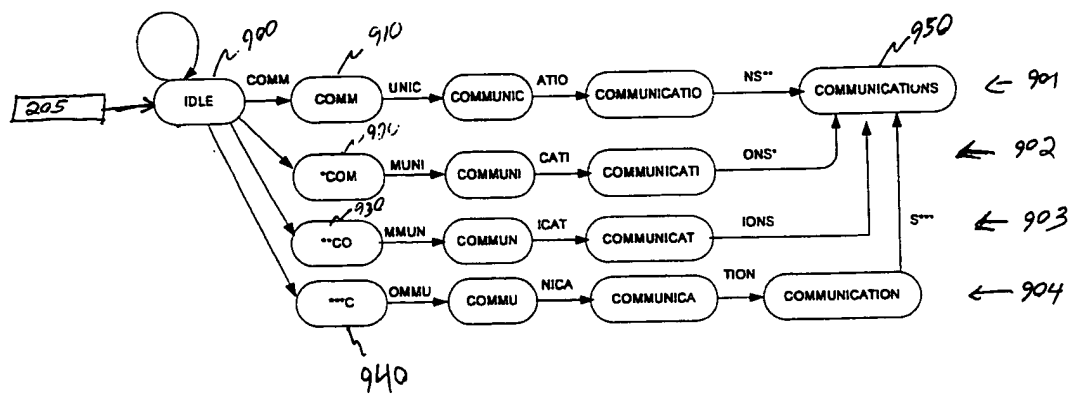


FIG. 9A

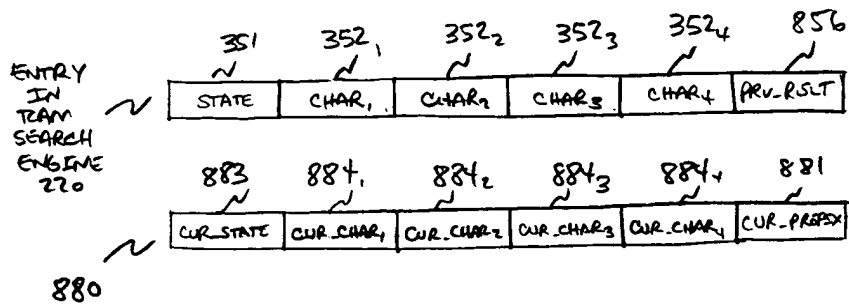


FIG. 9B

Address	STATE	CHARS	NXT STATE	BSLT	ACTION
0	COMM	UNIC	COMMUNIC	0	NOP
1	COMMUNIC	ATIO	COMMUNICATIO	0	NOP
2	COMMUNICATIO	NSCO	CO	102	Output result
3	COM	MUNI	COMMUNI	0	NOP
4	COMMUNI	CATI	COMMUNICATI	0	NOP
5	COMMUNICATI	ONSC	C	102	Output result
6	CO	MMUN	COMMUN	0	NOP
7	COMMUN	ICAT	COMMUNICAT	0	NOP
8	COMMUNICATION	SCOM	COM	102	Output result
9	C	OMMU	COMMU	0	NOP
10	COMMU	NICA	COMMUNICA	0	NOP
11	COMMUNICA	TION	COMMUNICATION	0	NOP
12	COMMUNICAT	IONS	IDLE	102	Output result
13	COMMUNICATIO	NS**	IDLE	102	Output result
14	COMMUNICATI	ONS*	IDLE	102	Output result
15	COMMUNICATION	S***	IDLE	102	NOP
16	*	COMM	COMM	0	NOP
17	*	*COM	COM	0	NOP
18	*	**CO	CO	0	NOP
19	*	***C	C	0	NOP
20	*	****	IDLE	0	NOP

Block 960<sub>1</sub> { 0-11  
Block 960<sub>2</sub> { 12-15  
Block 960<sub>3</sub> { 16-19  
Block 960<sub>4</sub> { 20

← TEAM 220 → | ← ASSOCIATED MEMORY 230 →

FIG 9.C.

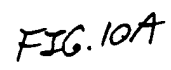


FIG. 10A

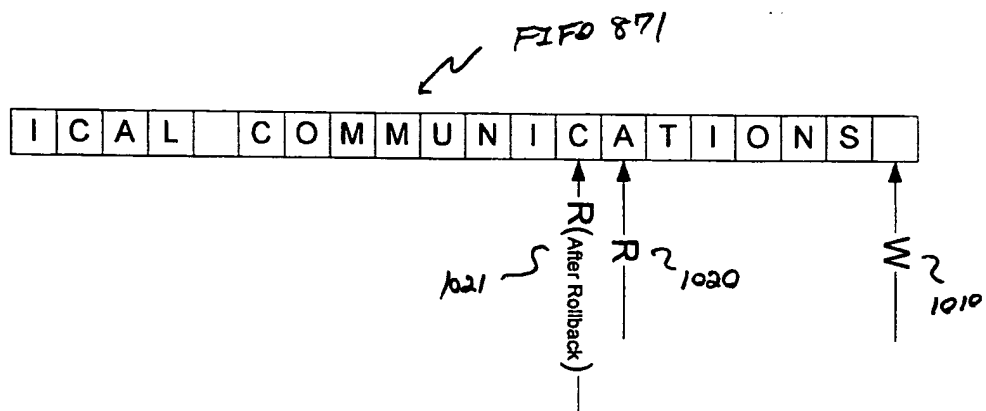


FIG. 10B

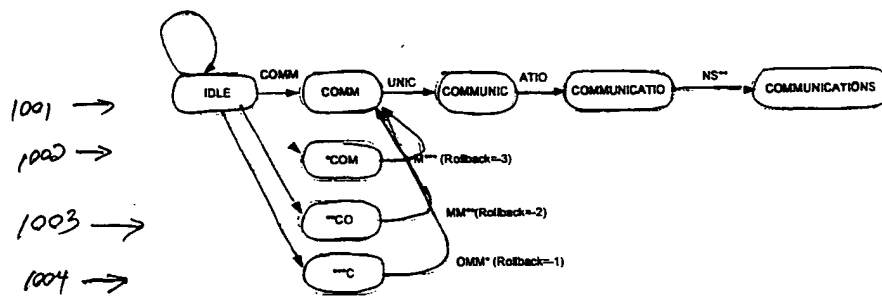


FIG. 10C



Address	STATE	CHARS	NXT STATE	ROLLEK	BSLT	ACTION
0	COMM	UNI*	COMMUNI	1	0	NOP
1	COM	MUNI	COMMUNI	0	0	NOP
2	COMMUNI	CATI	COMMUNICATI	0	0	NOP
3	COMMUNICATI	ONS*	IDLE	1	102	Output result 102
4	CO	MMUN	COMMUN	0	0	NOP
5	COMMUN	I***	COMMUNI	3	0	NOP
6	C	OMMU	COMMU	0	0	NOP
7	COMMU	NI**	COMMUNI	2	0	NOP
8	*	COMM	COMM	0	0	NOP
9	*	*COM	COM	0	0	NOP
10	*	**CO	CO	0	0	NOP
11	*	***C	C	0	0	NOP
12	*	****	IDLE	0	0	NOP

Block 1030, {

Block 1030<sub>2</sub> {

Block 1030, {

← TEAM 220 → | ← ASSOCIATED MEMORY 230 →

FIG. 10D

1100 ✓

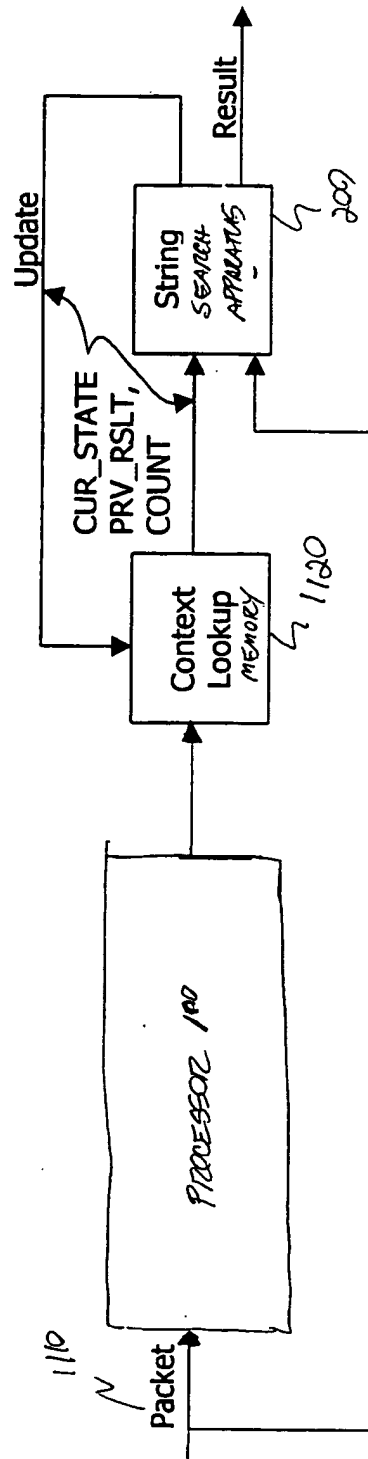


FIG. 11